

**What is Claimed is:**

1. A communications network comprising a plurality of interconnected network sites, at least one network site being a transaction terminal, wherein intelligent agent programs are used to convey information between sites on the network for facilitating efficient maintenance of the transaction terminal.

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2. A network according to claim 1, wherein each transaction terminal has an intelligent agent handler for receiving intelligent agents from the network and for launching intelligent agents into the network, wherein the agent handler allows a received intelligent agent to execute within the context of the handler.

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3. A network according to claim 1, wherein the network routes intelligent agent programs through itself by reference to network site address information carried by each agent program.

4. A network according to claim 1, wherein each transaction terminal includes operation monitoring facilities that record operating information associated with service elements within that terminal.

5. A network according to claim 1, wherein one network site in the communications network includes a server which provides transaction processing capabilities for one or more transaction terminals.

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6. A network according to claim 5, wherein the server has a monitor for sending out monitor intelligent agent programs for collecting and storing operating information from each of the available transaction terminals.

7. A network according to claim 6, wherein the monitor is operable to receive a returning monitor intelligent agent program and to extract from the returning monitor intelligent agent program the stored operating information for each transaction terminal visited.

8. A network according to claim 7, wherein the monitor includes facilities that analyze the operating information and predict when a transaction terminal may require maintenance.

9. A transaction terminal for use with a communications network, the terminal comprising: one or more service elements; operation monitoring facilities that record operating information associated with the one or more service elements; an I/O network interface; and an intelligent agent handler for receiving an intelligent agent via the I/O interface and for sending the received intelligent agent to the next destination; whereby, the received intelligent agent is executed by the handler so that the received intelligent agent retrieves and stores operating information from the operation monitoring facilities.

10. An automatic maintenance requesting communications network system comprising at least one transaction terminal and at least one maintenance terminal; whereby when a maintainer logs in to the maintenance terminal an intelligent agent service program is sent to the transaction terminal to convey information about the maintainer and about the network address of the maintenance terminal to the service agent registry, so that in the event

of a malfunction the transaction terminal is able to send an intelligent agent alert program conveying a maintenance request to the maintenance terminal.

11. An automatic maintenance requesting communications network system according to claim 10, wherein the maintainer information includes details for ranking the priority of the maintainer, so that in the event of a malfunction the intelligent agent alert program is sent first to the maintainer having the highest priority.

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12. An automatic maintenance requesting communications network system according to claim 11, wherein if the maintainer having highest priority fails to respond to the intelligent agent alert program within a predetermined time period, the alert agent travels to the maintainer with the next highest priority.

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13. A transaction terminal for use in an automatic maintenance requesting communications network, where the transaction terminal comprises: an intelligent agent handler; operation monitoring facilities that detect malfunctions; and a service agent registry; whereby, in use, the intelligent agent handler receives and executes intelligent agent service programs which store maintainer information and maintenance terminal information in the service agent registry, so that on detecting a malfunction the operation monitoring facilities are able provide the handler with information relating to one or more maintainers from the service agent registry for use in creating an intelligent agent alert program for sending to the one or more maintainers.

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14. A transaction terminal according to claim 13, wherein the operation monitoring facilities select a plurality of maintainers and prioritizes these selected maintainers so that the alert agent visits the selected maintainers in the prioritized order.

15. A method of communicating intelligent agent programs through a communications network comprising a plurality of interconnected network sites, the network having a server at one network site and a transaction terminal at another network site, the transaction terminal having at least one service element, the method comprising the steps of:

5 monitoring the service element to derive operating data relating to an operating parameter thereof and; launching from the transaction terminal to the server an intelligent agent program carrying the operating data.

16. A communications network comprising a plurality of interconnected network sites, and intelligent agent programs that route through the communications network by reference to site address information carried by each agent program, wherein the network has a terminal network site which includes:

- 5 a transaction terminal having at least one service element;
- monitoring facilities that derive operating data relating to an operating parameter of the service element;
- an operating data registry to receive operating data from the monitoring facilities; and
- 10 a data processor programmed to launch an intelligent agent program carrying the operating data from the terminal network site into the network.

17. A communications network as claimed in claim 16, wherein the data processor is programmed to launch an intelligent agent program by re-addressing a visiting agent program to which the operating data has been added.

18. A communications network as claimed in claim 16, wherein the data processor is programmed to launch an intelligent agent program in the form of an alert program which has been generated at the said terminal network site to carry the operating data.

19. A communications network as claimed in claim 16, wherein the data processor is programmed to collect site address information from visiting agent programs.

20. A communications network as claimed in claim 16, wherein the terminal network site constitutes one of a plurality of such terminal network sites.

21. A communications network as claimed in claim 20, wherein at least one of the terminal network sites comprises a self-service cash dispensing terminal site.

22. A communications network as claimed in claim 20, wherein at least one of the terminal network sites comprises a retail point of sale terminal site.

23. A communications network as claimed in claim 20, wherein at least one of the terminal network sites comprises a self-service terminal site.

24. A communications network as claimed in claim 16, further including a monitor network site which includes:

a data processor to launch agent programs to visit the terminal network site or sites so as to collect operating data therefrom for return to the monitor network site, and

5 a monitoring data registry to register the operating data returned to the monitor network site.

25. A terminal network site for connection to a network as claimed in claim 16, the terminal network site comprising:

a transaction terminal having at least one service element;

5 monitoring facilities that derive operating data relating to an operating parameter of the service element;

an I/O port for the communication of intelligent program agents into the terminal network site from the network and from the terminal network site into the network;

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a data processor to receiving and processing program agents visiting the terminal network site and received through the I/O port; and

10 an operating data registry to receive operating data from the monitoring facilities;

the data processor being programmed to launch an intelligent agent program carrying the operating data from the terminal network site into the network.

26. A network site as claimed in claim 25, wherein the data processor is programmed to launch an intelligent agent program by re-addressing a visiting agent program to which the operating data has been added.

27. A network site as claimed in claim 16 wherein the data processor is programmed to launch an intelligent agent program in the form of an alert program which has been generated at the said terminal network site to include the operating data.

28. A method of communicating intelligent agent programs through a communications network comprising a plurality of interconnected network sites and intelligent agent programs routing through the communications network by reference to site address information carried by each agent program, the network having a monitoring network  
5 site and a terminal network site including a transaction terminal having at least one service element, the method comprising the steps of:

monitoring the service element to derive operating data relating to an operating parameter thereof; and

10 launching from the terminal network site to the monitor network site an intelligent agent program carrying the operating data.

29. A method as claimed in claim 28, wherein the step of launching an intelligent agent program comprises re-addressing a visiting agent program to which the operating data has been added.

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30. A method as claimed in claim 28, wherein the step of launching an intelligent agent program comprises launching via an alert program which has been generated at the said terminal network site to carry the operating data.

31. A method as claimed in claim 28, comprising the further step of collecting site address information from visiting agent programs.

32. A method of servicing an electronic device interconnected over a network that includes sending a registration message to the device over the network when an authorized service representative logs on to the network, informing the device of the network address of the service representative, and storing the address within the device to enable notification to  
5 be sent to the service representative in the event of a designated operating condition.

33. A method of servicing an electronic device interconnected over a network that includes sending a registration message to the device over the network when the device initializes, informing the device of the network address of an authorized service representative already logged on to the network, and storing the address within the device to  
5 enable notification to be sent to the service representative in the event of a designated operating condition.

34. A method of servicing an electronic device interconnected over a network that includes storing in the device a network address of an authorized service representative, to enable notification to be sent to the service representative in the event of a designated operating condition, and informing the device when the representative logs off the network or  
5 becomes otherwise unavailable to perform required services.

35. A method of servicing an electronic device interconnected over a network that includes electronically storing network addresses of authorized service representatives, to enable notification to be sent to the service representatives in the event of a designated

operating condition of the device, further storing priority information indicating a preferred  
5 order in which the service representatives are to be notified in the event that the designated  
operating condition occurs, and first notifying the service representative at the top of the  
preferred order in the event of the designated operating condition.

36. A method of servicing an electronic device interconnected over a network that  
includes electronically storing identifiers of the location proximity of authorized service  
representatives qualified to service a designated operating condition of the device, and in the  
event that the designated operating condition occurs, first notifying the closest representative  
5 as determined by the stored identifiers.

37. A method of servicing an electronic device interconnected over a network that  
includes electronically storing identifiers of the qualifications of service representatives  
authorized to service different designated operating conditions of the device, and in the event  
that a designated operating condition arises, first notifying the representative most qualified  
5 to perform required services as determined by the stored identifiers and the condition that  
arose.

38. A method of servicing an electronic device interconnected over a network that  
includes electronically storing priority information indicating a preferred order in which  
authorized service representatives are to be notified in the event of a designated operating  
condition within the device, first notifying the service representative at the top of the  
5 preferred order in the event that the designated operating condition occurs, and then notifying  
the service representative next in the preferred order if within an allotted time period the first  
notified service representative declines or fails to commit to perform the services required.

39. A method of servicing an electronic device interconnected over a network that  
includes electronically storing priority information indicating a preferred order in which  
authorized service representatives are to be notified in the event of a designated operating



condition within the device, and first notifying the service representative at the top of the  
 5 preferred order in the event that the designated operating condition occurs, where the  
 notification includes the stored priority information to enable notification of the next  
 preferred service representative if within an allotted time period the first notified service  
 representative declines or fails to commit to perform the services required.

40. A system in which an electronic device and terminals of service  
 representatives authorized to service a designated operating condition of the device are  
 interconnected over a network, including storage within the device of priority information  
 indicating a preferred order in which the service representatives are to be notified if a  
 5 designated operating condition occurs, and in which notifications to service representatives  
 include the priority information to enable notification of the next preferred service  
 representative if within an allotted time period the last notified service representative declines  
 or fails to commit to perform the services required.

41. An intelligent alert agent computer program that facilitates servicing of an  
 electronic device by authorized service representatives having terminals interconnected with  
 the device over a network, and that includes data in the form of priority information  
 indicating a preferred order in which the service representatives are to be notified if a  
 5 designated operating condition occurs within the electronic device, and operating by being  
 transmitted to the terminal of the preferred service representative when the designated  
 operating condition occurs, executing on the receiving terminal, initiating an alert as to the  
 existing condition of the device, and transferring itself to the terminal of the next preferred  
 service representative if within an allotted time period the first preferred service  
 10 representative declines or fails to commit to perform the services required.

42. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where the nature and form of the information are selected according to the state of the device, and where the information includes instructions on how to carry out applicable servicing.

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43. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where the nature and form of the information are selected according to the state of the device and profile data associated with a service person to whom the communication is directed.

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44. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where the information is expressed in a language selected according to profile data associated with a service person to whom the communication is directed.

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45. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where the technical level of the information is selected according to profile data associated with a service person to whom the communication is directed.

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46. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which a servicing person's terminal and the central server intercommunicate with regard to servicing of the transaction terminal element, and in which information conveyed to a servicing person's terminal by the central server is customized according to profile data for the associated servicing person.

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47. A networked transaction processing terminal having a local data processor and agent handler logic that listens for incoming intelligent agent programs that gather servicing related data resident at the terminal for communication over the network.

48. A networked peripheral module for a transaction processing terminal having a local data processor and agent handler logic that listens for incoming intelligent agent programs that gather servicing related data resident at the module for communication over the network.

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49. A networked transaction processing terminal having a local data processor and agent handler logic that launches intelligent agent programs for communication over the network of servicing related data resident at the terminal.

50. A networked peripheral module for a transaction processing terminal having a local data processor and agent handler logic that launches intelligent agent programs for communication over the network of servicing related data resident at the module.

51. A networked transaction processing terminal having a local data processor and Web server logic that communicates servicing related data resident at the terminal and made accessible to another networked terminal via a Web browser program.

52. A networked peripheral module for a transaction processing terminal having a local data processor and Web server logic that communicates servicing related data resident at the module and made accessible to another networked terminal via a Web browser program.

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53. A system comprising a networked transaction terminal element and a servicing person's terminal interconnected over a network, in which the transaction terminal element has a data processor, Web server logic and a memory storing state or condition information pertaining to the terminal element, and where the information is accessible to the servicing person via a Web browser program running on the servicing person's terminal.

54. A method of servicing an electronic device interconnected over a network that includes posting of device state information on a Web page accessible to servicing personnel via a web browser program running on a service person's terminal.

55. A method of servicing an electronic device interconnected over a network that includes posting of device state information on a web page accessible to servicing personnel via a Web browser program running on a service person's terminal, where the information is at least in part gathered from the device through Web server logic operable on the device.

56. A system comprising a networked transaction terminal element, a central server and a servicing person's terminal interconnected over a network, in which the servicing person's terminal is notified in the event of an error condition within the transaction terminal element, and in which the central server is notified in response to a Web page interaction when the servicing person has serviced the error condition.

57. A system comprising a networked transaction terminal element, a central server and a servicing person's terminal interconnected over a network, in which the servicing person's terminal and the central server intercommunicate via a Web page interface with regard to servicing of the transaction terminal element.

58. A system comprising a networked transaction terminal element, a central server and a servicing person's terminal interconnected over a network, in which the transaction terminal element notifies the central server and the central server notifies the servicing person's terminal in the event of an error condition within the transaction terminal element, and in which the central server provides information concerning the error condition via a Web page accessible to the servicing person's terminal.

59. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element notifies the central server and the central server notifies one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which the central server provides information concerning the error condition via a Web page accessible to the servicing person's terminal.

60. A system comprising a networked transaction terminal element, a central server and a servicing person's terminal interconnected over a network, in which the transaction terminal element has a data processor, web server logic and a memory storing state or condition information pertaining to the terminal element, where the information is accessible to the a servicing person via a query or request made to the central server, and where the central server retrieves the information from the transaction terminal element and posts it on a Web page viewable through a Web browser program running on the servicing person's terminal.

61. A system comprising a networked transaction terminal element and a servicing person's terminal interconnected via a wireless interconnection over a network, in which the transaction terminal element notifies the servicing person's terminal in the event of an error condition within the transaction terminal element.

62. A system comprising a networked transaction terminal element and a servicing person's terminal interconnected via a cellular telephone interconnection over a network, in which the transaction terminal element notifies the servicing person's terminal in the event of an error condition within the transaction terminal element.

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63. A system comprising a networked transaction terminal element and a servicing person's terminal in the form of a portable computing device interconnected over a network, in which the transaction terminal element notifies the servicing person's terminal in the event of an error condition within the transaction terminal element.

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64. A system comprising a networked transaction terminal element and a servicing person's terminal in the form of a laptop computer interconnected over a network, in which the transaction terminal element notifies the servicing person's terminal in the event of an error condition within the transaction terminal element.

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65. A system comprising a networked transaction terminal element and a servicing person's terminal in the form of a portable hand held computing device interconnected over a network, in which the transaction terminal element notifies the servicing person's terminal in the event of an error condition within the transaction terminal element.

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66. A system comprising a networked transaction terminal element and a servicing person's terminal in the form of a personal digital assistant computing device interconnected over a network, in which the transaction terminal element notifies the servicing person's terminal in the event of an error condition within the transaction terminal element.

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67. A networked transaction processing terminal element having a local data processor and operation logic including a main class section that instantiates and services communications between other class sections comprising the operation logic, where the other class sections are separate logic components that may be readily added or removed in accordance with processing requirements at the terminal element.

68. A networked transaction processing terminal element having a local data processor and operation logic including a logs class section programmed to store and provide access to servicing related data resident at the terminal element, and a main class section programmed to receive calls for the servicing related data, and to fetch and return requested data from the logs class section in response such calls, in which the logs class section is a separate logic component that may be readily added or removed in accordance with processing requirements at the terminal element.

69. A networked transaction processing terminal having a local data processor and operation logic including a main class section that instantiates a logs class section programmed to store and provide access to servicing related data resident at the terminal, an embedded server class section that receives and responds to requests for the stored data made over the network, and an agent handler class section that provides the stored data to and launches intelligent agent programs outgoing onto the network; where the logs class section, the embedded server class section and the agent handler class section are separate logic components that may be readily added or removed in accordance with processing requirements at the terminal.

70. A networked peripheral module for a transaction processing terminal having a local data processor and operation logic including a main class section that instantiates and services communications between other class sections comprising the operation logic, where the other class sections are separate logic components that may be readily added or removed in accordance with processing requirements at the module.

71. A networked peripheral module for a transaction processing terminal having a local data processor and operation logic including a logs class section programmed to store and provide access to servicing related data resident at the module, and a main class section programmed to receive calls for the servicing related data, and to fetch and return requested data from the logs class section in response such calls, in which the logs class section is a separate logic component that may be readily added or removed in accordance with processing requirements at the module.

72. A networked peripheral module for a transaction processing terminal having a local data processor and operation logic including a main class section that instantiates a logs class section programmed to store and provide access to servicing related data resident at the module, an embedded server class section that receives and responds to requests for the stored data made over the network, and an agent handler class section that provides the stored data to and launches intelligent agent programs outgoing onto the network; where the logs class section, the embedded server class section and the agent handler class section are separate logic components that may be readily added or removed in accordance with processing requirements at the module.

73. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where the communication is automatically triggered by a service person's acceptance of responsibility for servicing a specified state condition that has occurred within the device.

74. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where the communication is made to allow a service person to decide whether or not to accept responsibility for correcting a state condition that has occurred within the device.



75. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where the communication is triggered by a process initiated by a state condition within the device occurring and being communicated over the network.

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76. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where the communication is triggered by a process initiated by a state condition within the device occurring and being communicated over the network by an alert agent program.

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77. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where the communication is triggered by a process initiated by a state condition within the device occurring and being communicated over the network by the device.

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78. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where the communication is triggered by a process initiated by a state condition within the device occurring and being communicated over the network by a regional or central server.

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79. A system comprising a networked transaction terminal element and a servicing person's terminal interconnected over a network, in which the transaction terminal element notifies the servicing person's terminal in the event of an error condition within the transaction terminal element.

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80. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element notifies one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element.

81. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element notifies one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which a servicing person's terminal notifies the transaction terminal element in the event that the associated servicing person accepts responsibility for servicing the error condition.

82. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element.

83. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which the intelligent agent program is programmed to return to the transaction terminal element to provide notification of whether a service person has accepted responsibility for servicing the error condition.

84. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which the intelligent agent program is programmed to return to the transaction terminal element in the event that all associated service persons have failed to accept responsibility for servicing the error condition.

85. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which the intelligent agent program is programmed to return to the transaction terminal element in the event that all associated service persons have rejected responsibility for servicing the error condition.

86. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which the intelligent agent program is transmitted to a particular servicing person's terminal as determined by a prioritized list of terminals to visit maintained by the program.

87. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which the intelligent agent program is programmed to visit the various servicing persons' terminals in succession until within an allotted period of time one of the servicing persons visited accepts responsibility for servicing the error condition that has occurred.

88. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the

- 5 transaction terminal element, and in which the intelligent agent program is programmed to continue to visit the various servicing persons' terminals in succession until a specified condition has occurred.

89. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the
- 5 transaction terminal element, and in which the intelligent agent program is programmed to continue to visit the various servicing persons' terminals in succession until within an allotted period of time during a visit, a servicing person being visited accepts responsibility for servicing the error condition that has occurred.

90. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the
- 5 transaction terminal element, and in which the intelligent agent program is programmed to continue to visit the various servicing persons' terminals in succession for a predetermined number of visits or until within an allotted period of time during a visit, a servicing person being visited accepts responsibility for servicing the error condition that has occurred.

91. A system comprising a networked transaction terminal element, a central server and a servicing person's terminal interconnected over a network, in which the transaction terminal element notifies the central server and the central server notifies the servicing person's terminal in the event of an error condition within the transaction terminal
- 5 element.

92. A system comprising a networked transaction terminal element, a central server and a servicing person's terminal interconnected over a network, in which the transaction terminal element notifies the central server and the servicing person's terminal in the event of an error condition within the transaction terminal element.

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93. A system comprising a networked transaction terminal element, a central server and a servicing person's terminal interconnected over a network, in which the transaction terminal element notifies the servicing person's terminal in the event of an error condition within the transaction terminal element, and in which the central server provides further information concerning the error condition to the servicing person's terminal, to provide instructions on how to service the error condition that has occurred.

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94. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element notifies the central server and the central server notifies one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element.

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95. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element notifies the central server and the central server notifies one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which the central server provides further information concerning the error condition to a servicing person's terminal, to facilitate a decision as to whether a service person contacted will agree to accept responsibility for servicing the error condition that has occurred.

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96. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element notifies the central server and the central server launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element.

97. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element notifies the central server and one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element.

98. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element notifies one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which the central server provides further information concerning the error condition to a servicing person's terminal, to facilitate a decision as to whether a service person contacted will agree to accept responsibility for servicing the error condition that has occurred.

99. A system comprising a networked transaction terminal element and a servicing person's terminal interconnected over a network, in which the servicing person's terminal notifies the transaction terminal element in the event that the servicing person accepts responsibility for servicing an error condition within the transaction terminal element.

100. A system comprising a networked transaction terminal element and a servicing person's terminal interconnected over a network, in which the transaction terminal element is notified in the event of a change in scheduled servicing of the terminal element.

101. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which one or more of the servicing persons' terminals are notified in the event of an error condition within the transaction terminal element, and in which a servicing person's acceptance of responsibility for servicing the error condition is communicated to the central server.

102. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which one or more of the servicing persons' terminals are notified in the event of an error condition within the transaction terminal element, and in which a servicing person's estimate as to when the error condition is likely to be serviced is communicated to the central server.

103. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which one or more of the servicing persons' terminals are notified in the event of an error condition within the transaction terminal element, and in which a servicing person's estimate as to when the error condition is likely to be serviced is communicated to the central server to allow proximity or availability based prioritization for service scheduling.

104. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which one or more of the servicing persons' terminals are notified in the event of an error condition within the transaction terminal element, and in which a servicing person's estimate as to when the error condition is likely to be serviced is communicated to the central server to allow proximity or availability based prioritization for service scheduling.

105. A system comprising networked transaction terminal elements, a central server and two or more servicing persons' terminals interconnected over a network, in which one or more of the servicing persons' terminals are notified in the event of an error condition within a transaction terminal element, and in which the central server makes proximity or availability based prioritization for service scheduling among the servicing persons on hand, where such prioritization is communicated to one or more of the transaction terminal elements to determine a visitation order for intelligent agent programs that a transaction terminal element may launch.

106. A system comprising a networked transaction terminal element and a servicing person's terminal interconnected over a network, in which the servicing person's terminal is notified in the event of an error condition within the transaction terminal element, and in which the transaction terminal element is notified via a network communication when the servicing person has serviced the error condition, to allow updating of a terminal element error condition registry.

107. A system comprising a networked transaction terminal element, a central server and a servicing person's terminal interconnected over a network, in which the servicing person's terminal is notified in the event of an error condition within the transaction terminal element, and in which the central server is notified when the servicing person has serviced the error condition.

108. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which the transaction terminal element launches a second intelligent agent program if the first one does not return within an allotted time period.



109. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which the transaction terminal element launches a second intelligent agent program if the first one returns to indicate that each associated service person has rejected or failed to accept responsibility for servicing the error condition that has occurred.

110. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which the transaction terminal element is notified as a servicing person's terminal is visited by the program and the associated service person accepts, rejects or fails to accept responsibility for servicing the error condition.

111. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, where the servicing persons' terminals are scheduled to be visited by the program in an order indicated by a priority list that the program carries, and in which the transaction terminal element launches a second intelligent agent program if the first one fails to produce a service person accepting responsibility for servicing the error condition, where the transaction terminal element launches a second intelligent agent program with a priority list updated to reflect new information ascertained or received by the transaction terminal element after launching of the first intelligent agent program.

112. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, where the servicing persons' terminals are scheduled to be visited by the program in a preset order, and in which the transaction terminal element launches a second intelligent agent program if the first one does not return within an allotted time period, where the second intelligent agent program is programmed to visit the servicing persons' terminals in a different preset order.

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113. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which the transaction terminal element launches an intelligent agent program onto the network to notify one or more of the servicing persons' terminals in the event of an error condition within the transaction terminal element, and in which the transaction terminal element is notified when a servicing person's terminal is no longer operative on the network, as may be determined by a servicing person's terminal logging off or failing to provide an anticipated communication or reply on the network.

114. A system comprising a networked transaction terminal element, a central server and a servicing person's terminal interconnected over a network, in which the transaction terminal element notifies the central server in the event a responsible service person fails to service an error condition within the transaction terminal element within an allotted period of time.

115. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where information concerning the state of the device is provided by the device in response to a monitor agent program launched onto the network by a regional or central server.

116. A system comprising networked transaction terminal elements and a central server interconnected over a network, in which the central server gathers state information from the transaction terminal elements by launching an intelligent agent program that successively visits and extracts information from transaction terminal elements and then  
5 returns to the central server with the extracted information.

117. A system comprising networked transaction terminal elements, a central server and two or more servicing persons' terminals interconnected over a network, in which the central server gathers state information from the transaction terminal elements and launches an intelligent agent program to notify one or more of the servicing persons' terminals in the event of a servicing requirement being determined from the state  
5 information.

118. A system comprising networked transaction terminal elements, a central server and two or more servicing persons' terminals interconnected over a network, in which the central server gathers state information from the transaction terminal elements by launching an intelligent agent program that successively visits and extracts information from  
5 transaction terminal elements and then returns to the central server with the extracted information, and in which the central server launches a second intelligent agent program to notify one or more of the servicing persons' terminals in the event of a servicing requirement being determined from the state information thus gathered.

119. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where the servicing personnel are notified of servicing requirements in response to predictions based at least in part on information reported by the device in response to a query  
5 made over the network.

120. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where information concerning the state of the device is provided by the device in response to a monitor agent program launched onto the network by a regional or central server, and  
5 where servicing requirements are predicted based at least in part on the information concerning the state of the device returned to the server by the monitor agent program.

121. A system comprising networked transaction terminal elements and a central server interconnected over a network, in which servicing requirements for a transaction terminal element are determined according to predictions made by the central server based on state information gathered from the transaction terminal element through launching of an  
5 intelligent agent program that successively visits and extracts information from transaction terminal elements and then returns to the central server with the extracted information.

122. A system comprising a networked transaction terminal element and two or more servicing persons' terminals interconnected over a network, in which when a servicing person's terminal logs onto the network, the log in process activates an agent handler routine in the servicing person's terminal for receiving and processing intelligent agent programs  
5 launched onto the network by the transaction terminal element.

123. A system comprising networked transaction terminal elements and two or more servicing persons' terminals interconnected over a network, in which when a transaction terminal element logs on to the network, the transaction terminal element is notified by a servicing person's terminal as to the network identity of a servicing person  
5 potentially available for servicing of the transaction terminal element.

124. A system comprising networked transaction terminal elements and two or more servicing persons' terminals interconnected over a network, in which when a transaction terminal element logs on to the network, a servicing person's terminal launches an intelligent agent program to notify the transaction terminal element as to the network  
5 identity of the associated servicing person who is potentially available for servicing of the transaction terminal element.

125. A system comprising networked transaction terminal elements and two or more servicing persons' terminals interconnected over a network, in which when a servicing person's terminal logs onto or off of the network, the servicing person's terminal launches an intelligent agent program to successively notify transaction terminal elements of a change in  
5 the network identity of servicing persons potentially available for servicing of the transaction terminal element.

126. A system comprising a networked transaction terminal element, a central server and a servicing person's terminal interconnected over a network, in which when the transaction terminal element logs on to the network, the transaction terminal element is notified by the central server as to the network identity of servicing persons potentially  
5 available for servicing of the transaction terminal element.

127. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which when the transaction terminal element logs on to the network, the transaction terminal element is notified by the central server as to the network identity of servicing persons  
5 potentially available for servicing of the transaction terminal element, for purposes of establishing a list of servicing persons' terminals to be notified via a network communication in the event of an error condition occurring within the transaction terminal element.

128. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which when the transaction terminal element logs on to the network, the transaction terminal element is notified by the central server as to prioritization data associated with servicing persons potentially available for servicing of the transaction terminal element, for purposes of establishing an order in which servicing persons' terminals are to be notified via a network communication in the event of an error condition occurring within the transaction terminal element.

129. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which when a servicing person's terminal logs onto or off of the network, the central server is notified to enable notification to the transaction terminal element of a change in the network identity of servicing persons potentially available for servicing of the transaction terminal element.

130. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which when a servicing person's terminal logs onto or off of the network, the central server is notified to enable updating of a list of servicing persons' terminals to be notified via a network communication in the event of an error condition occurring within the transaction terminal element.

131. A system comprising a networked transaction terminal element, a central server and two or more servicing persons' terminals interconnected over a network, in which when a servicing person's terminal logs onto the network, the central server notifies the transaction terminal element as to prioritization data associated with the corresponding servicing person, for purposes of establishing an updated order in which servicing persons'

terminals may be notified via a network communication in the event of an error condition occurring within the transaction terminal element.

132. A system comprising networked transaction terminal elements, a central server and two or more servicing persons' terminals interconnected over a network, in which when the transaction terminal element logs on to the network, the central server launches an intelligent agent program to notify the transaction terminal element as to the network identity  
5 of servicing persons potentially available for servicing of the transaction terminal element.

133. A system comprising networked transaction terminal elements, a central server and two or more servicing persons' terminals interconnected over a network, in which when transaction terminal elements log on to the network, the central server launches an intelligent agent program to successively notify the transaction terminal elements as to the  
5 network identity of servicing persons potentially available for servicing of the transaction terminal elements.

134. A system comprising networked transaction terminal elements, a central server and two or more servicing persons' terminals interconnected over a network, in which when a transaction terminal element logs on to the network, a servicing person's terminal launches an intelligent agent program to notify the transaction terminal element as to the  
5 network identity of the associated servicing person who is potentially available for servicing of the transaction terminal element, the intelligent agent program being first routed to the central server where it is checked and authorized before being transmitted to the transaction terminal element.

135. A system comprising networked transaction terminal elements, a central server and two or more servicing persons' terminals interconnected over a network, in which when transaction terminal elements log on to the network, a servicing person's terminal launches an intelligent agent program to successively notify the transaction terminal elements

- 5 as to the network identity of the associated servicing person who is potentially available for servicing of the transaction terminal elements, the intelligent agent program being first routed to the central server where it is checked and authorized before being transmitted to the transaction terminal elements.

136. A system comprising networked transaction terminal elements, central server and two or more servicing persons' terminals interconnected over a network, in which when a servicing person's terminal logs onto or off of the network, the servicing person's terminal launches an intelligent agent program to successively notify transaction terminal elements of a change in the network identity of servicing persons potentially available for servicing of the transaction terminal elements, the intelligent agent program being first routed to the central server where it is checked and authorized before being transmitted to the transaction terminal elements.

137. A system comprising networked transaction terminal elements, a central server and two or more servicing persons' terminals interconnected over a network, in which when a servicing person's terminal logs onto the network, the log in process establishes associated servicing details which details are selectively communicated to the central server and one or more of the transaction terminal elements to facilitate efficiency of servicing by the associated servicing person.

138. A system comprising networked transaction terminal elements, a central server and two or more servicing persons' terminals interconnected over a network, in which when a servicing person's terminal logs onto or off of the network, the central server is notified by the servicing person's terminal and the central server launches an intelligent agent program to notify one or more of the transaction terminal elements.



139. A system comprising networked transaction terminal elements, a central server and two or more servicing persons' terminals interconnected over a network, in which when a servicing person's terminal logs onto or off of the network, the servicing person's terminal launches an intelligent agent program that first visits the central server where it  
5 acquires a list of transaction terminal elements be visited, and then is launched to successively notify each of the transaction terminal elements on the list.

140. A system comprising networked transaction terminal elements, a central server and two or more servicing persons' terminals interconnected over a network, in which when a servicing person's terminal logs onto or off of the network, the servicing person's terminal launches an intelligent agent program that first visits the central server where it  
5 acquires a list of network addresses and ports of transaction terminal elements be visited, and then is launched to successively notify each of the transaction terminal elements represented on the list.

141. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where notification that a specified state condition has occurred within the device is first provided by an alert agent program running on the device, and where additional information  
5 concerning the state of the device is provided by the device in response to a query made through a regional or central server.

142. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where notification that a critical error has occurred within the device is provided by an alert agent program running on the device, and where information concerning non-critical errors  
5 occurring within the device is provided in response to a query made through a regional or central server.

143. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where the communication is triggered by an inquiry made by an authorized service person who has been advised via a preceding network communication that a specified state condition  
5 has occurred within the device.

144. A method of servicing an electronic device interconnected over a network that includes communication of servicing information over the network to servicing personnel, where notification that a critical error has occurred within the device is first provided by an alert agent program running on the device, and where additional information concerning the  
5 critical error condition in response to a query made through a regional or central server.

145. A system comprising a networked transaction terminal element, a central server and a servicing person's terminal interconnected over a network, in which the transaction terminal element notifies the central server and the central server notifies the servicing person's terminal in the event of an error condition within the transaction terminal  
5 element, and in which the central server provides further information concerning the error condition to the servicing person's terminal, to provide instructions on how to service the error condition that has occurred.

146. A system comprising networked transaction terminal elements, a central server and two or more servicing persons' terminals interconnected over a network, in which the central server maintains an updated database of transaction terminal element status information and servicing person status information, and in which the database is accessible  
5 via query through a servicing person's terminal, e.g., to gather further information regarding a transaction terminal element's state of health, servicing instructions for a specified problem, or general information regarding the condition of transaction terminal elements in a specified area or in the proximity of a transaction terminal element scheduled to be serviced.

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